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INTERIOR OF LUTHER'S STUDY.

VISIT TO THE HAUNTS OF LUTHER.

WILL you, courteous reader, in your leisure hour, become my fellow traveller? I was last summer at Wittenberg, in Germany, where I was much interested in tracing the footprints of Luther. I am now in imagination going thither again: will you give me the pleasure of your company? You shall see all the memorable things in a few minutes.

This, then, is the town of Wittenberg—now in Prussia; when Luther lived in it, however, it was in Saxony. The wars of Napoleon, which changed many things in Europe, caused the transfer of the territory in which it stands from the latter kingdom to the former. It is, as you see, a fortress, entirely surrounded by a strong fortification, and flanked by two batteries commanding the course of the river Elbe, on which it stands. We are now about the middle of the town, and there, just be-

fore us, is a large and respectable, though not handsome building, called the Augusteum. It is the ancient university, in which Luther was appointed to a professorship by the then Elector of Saxony. This great man was not born here, but at a town called Eisleben, also in Saxony, in the year 1483. Awed by a flash of lightning, which killed a friend with whom he was walking, he threw himself into a monastery belonging to the Augustinian friars. He became so diligent and successful a student, especially of the Bible, a copy of which he first found in the library of the house, that he acquired a high reputation, and, upon a vacancy occurring at Wittenberg, he was promoted to the chair, first of philosophy, and then of sacred theology there. A monastery of the Augustinians, the order to which Luther belonged, stands there, directly behind the Augusteum, and separated from it only by a middle-sized garden. That is the place in which Luther lived as a friar,

and this garden, the little oblong beds and paths of which do not seem to have been altered since his days, is the very spot in which he took his daily walks. The monastery, you observe, is externally very plain, and even ugly; but we will go into the interior presently.

In this place Luther was quietly residing with his brother friars, performing matins and vespers, and counting the beads of his rosary, diversifying his religious exercises with his periodical walks and theological lectures, and enjoying the highest celebrity as a professor, when the town of Wittemberg, in common with a large part of Europe, was thrown into great excitement by the arrival of a monk named Tetzel, who came with authority from the pope to effect a great sale of indulgences, or pardons from sin both prospective and retrospective, for money. Luther saw the wickedness and felt the scandal of this proceeding, and he resolved to oppose it. He accordingly wrote an argumentative paper against indulgences, in which he expressed his views in ninety-five propositions (or *theses*, as they were called in Latin), and challenged Tetzel, with any others who pleased, publicly to dispute them. This paper, of which there is, I believe, a copy in the British Museum, he nailed upon the door of that church which you see yonder, the *schloss-kirche*, or castle-church, so called because it adjoins the castle. There is the very place on the door to which it was affixed.

This assault on the sale of indulgences, which had been so highly patronized, and which had brought to the papal treasury so much money, caused, you will recollect, a great excitement and a vehement controversy. It was, indeed, the commencement of the Reformation. Luther followed up his theses by lectures in the University, and by efforts in the pulpit. That is the church in which he officiated—the *stadt-kirche*, or town-church, and in which he preached the gospel with great earnestness and success. It was not in that pulpit that he preached, however; you see it is nearly new; but, if you will come with me I will show you the stairs that led to his pulpit. There they are, in that corner. A shabby affair, are they not, according to our notions? just like a ladder up which one goes in the present day to a hen-roost. Little did it matter how Luther got into the pulpit, however, for when he was there he preached with a power which stirred the whole town, and I may say the whole country too. The excitement, indeed, spread all the way to Rome, where the pope and the cardinals were indignant, and made many attempts to put the reformer down. At first they thought this would be very easy, but they did not find it so; and after many ineffectual attempts at persuasion and intimidation, the pope issued a bull, or official document, excommunicating him. This it was fully expected would settle the matter, since such a thing had never been heard of as a simple member setting at nought a pope's bull. So it was to be, however; for Luther, strong in his convictions of the truth, and not at all daunted by the threats and machinations employed against him, resolved, not only to disregard the bull of excommunication, but to do this in the most public and influential manner. He accordingly took it in his hand just outside of the town, going through the Elster gate—the very

gate we are passing now—and placing himself under an oak, which grew just there, he set it on fire, and burnt it to ashes, in the presence of an immense concourse of people. You see an oak is growing there now, within those railings, but that is a young one, not fifty years old; the large old tree under which Luther stood was cut down by the French, for purposes of military defence, when the fortress was held by them, and this young tree was afterwards planted on the same spot by the Prussian government.

We all know that the Reformation, thus begun by Luther, made great and rapid progress. After a while that Augustinian monastery was a monastery no longer, and Luther no longer a friar. He entered into domestic life by marrying Catharine von Bora, a lady who had been a nun, but who made him for many years an excellent and devoted wife. He lived as a family man in the very building in which he had lived as a friar—the Augustinian monastery—in a suite of rooms which was converted into a house for him. We will, if you please, go upstairs into the parlour which he and his family occupied, and which is yet preserved for the gratification of visitors. This is the room. Look round it for a moment. It is a very comfortable sitting-room, sufficiently large and lofty; and, indeed, a room which must have been very handsome. Overlooking the decayed state of the floor, it is handsome still. You notice the ornamental character of the window and of the ceiling. Observe also the furniture. There are two very old-fashioned chairs, standing by the window. One has its back towards you, a rather large chair, with arms; that was Luther's. There, sit down in it. A comfortable chair is it not? although rude and inelegant. That chair now just before you, and facing the window, smaller and without arms, belonged to Luther's wife, and many a tidy piece of work, no doubt, did she do in it. Tidy, however, is not quite the word, for her needlework was beautiful. There is a specimen of it in the cupboard behind you—actually a portrait of her husband, wrought entirely with a needle and silk; it is a good likeness too, and the work is exquisite. Now, if you turn round, you will see a good-sized oak table, square and without leaves, old and decaying: that is Luther's table, at which he ate, and read, and wrote. And there in the corner is his stove, made after the old German fashion, and covered, at his particular desire, with numerous carvings in wood. A great many persons, and not a few illustrious persons, have come into this parlour, and before we quit it you may perhaps think it worth while to notice a memorial left by one of them. It is there, on the door, and consists of a few illegible chalk marks. That is the signature of Peter the Great, emperor of Russia; and so valuable has it been thought as a memorial of him, that it has been protected by being framed and glazed.

Well, there Luther lived, but he did not die there. He died at Eisleben, his native place, where he was buried, but his body was afterwards brought to Wittemberg, and laid in the castle-church. This good woman will open the door for us, and show us the grave. There it is, you see, in the body of the church, about the middle; not a tomb, but a grave; and as it is about six inches below

the present pavement of the church, it is covered with a wooden lid which the woman will lift up for us. Now it is open; it is as though you could look down into the very grave itself, and see the dark chamber in which he sleeps, and from which he shall rise again. Is it not a solemn and interesting spectacle?

This great man seems to be still the soul of Wittenberg, and to live in it every where. You have already seen several portraits of him. There was one in his parlour, one in the town-church, in which his wife and son were associated with him, and here is one in the castle-church also. If now we go into the market-place, an ample area in the middle of the town, we shall find a bronze statue of him, handsomely placed upon a pedestal, and under a canopy. And there is yet another portrait of him in the rath-haus, or town-hall, that large and venerable building which occupies one whole side of the market-place. Let us go into it; but we must mind whom we address, as it is full of officials on the business of the magistrates. Here is a gentleman who knows what we want, and he will show us what remains to be seen of Luther. Here is his handwriting, exhibited in many of his letters. And here, in this handsome room, the council chamber, is his portrait. Here, too, is his rosary, the string of beads, some large and some small, by means of which, when a friar, he counted his prayers. And here is his hour-glass. You recollect that the hour-glass was used to measure time before clocks and watches were invented; but this of Luther's is perhaps more complex than any you ever saw. There are no less than five glasses, each adapted to measure a different portion of time, from five minutes to several hours. Good and faithful man! He valued his minutes, no doubt, as well as his hours, and employed them laboriously for God and for his kind; but both his hours and minutes are all run now, and the sand which measured them bears no testimony to the manner in which they were spent. Yet a witness there was, and a record there still is. His witness was in heaven, and his record is on high.

THE AUTOBIOGRAPHY OF A SHILLING.

THE precise period of my birth has never been satisfactorily ascertained, and, indeed, whether I had parents at all has been doubted by some who are reputed to be well informed upon the subject. During many a long century, my substance lay unobserved and unconscious beneath the soil of Peru; and had it not been for an interesting incident, which I shall relate, I might have remained still longer unnoticed. Some time, however, towards the middle of the sixteenth century, a hunter being one day in pursuit of game, stumbled over the root of a tree, and would have fallen had he not laid hold of a shrub which stood invitingly at hand. The roots giving way, revealed, to his astonishment and admiration, a beautiful filamentous and entangled web of pure silver, and the existence of the treasures of Potosi, in which I lay embedded, was discovered. I shall not attempt to recount his delight upon the occasion, his communication of the important intelligence to his friends, the mine that was subsequently dug, and

the various circumstances that followed.* I may only linger for a moment to speak of the position and subsequent history of the scene of my birth, my information having been obtained from the best authority. The Cerro de Potosi is, I am told, some eighteen miles in circuit, rising to the height of more than sixteen thousand feet. I have heard that, till about the year 1545, the mines in its bosom were not systematically worked; but, during the fifty years that followed, nearly three hundred thousand pounds worth of silver was obtained, and about five thousand openings were made into the mountain. The lump of ore of which I formed a part, was torn from its native bed about the end of last century. After being separated from the dross, by means of quicksilver, by the Indian into whose hands I came, I was exchanged by him to a native merchant, who shipped me off on a mule's back to a distant seaport. A British man-of-war was lying there, and, along with a cargo of bullion, I found myself ere long safely stowed within its hatches, being invoiced to a wealthy London capitalist. After a tedious voyage, I at last found myself in the British metropolis, where much of my subsequent life has been passed.

After exchanging ownership many times, and being subjected to much scrutiny and many tests, I was, one fine morning, transferred to some people who placed me with a number of dollars in a melting vessel, and exposed me to the heat of a powerful fire. At length, after losing a good deal of dross, I found myself forming part of an ingot of silver, and was duly transferred ere long to the custody of the master of the mint. Here I and the companions of this new coalition were weighed and numbered, and I found that preparations were soon making for another melting.

A large pot was placed in a furnace, and when it was red-hot I was put in it, and again subjected to an intense heat. When I had been there a short time, I found that some coarsely-grained charcoal powder had also been enclosed with me, and the amount was increased till it was nearly half-an-inch deep on the surface; which I afterwards learned was to prevent my adhering to the side of the pot, and to keep me during these melting moments from the action of the common air, which would have made me too refined for the purposes for which I was intended. Having been thus thoroughly melted, I was stirred up with an iron rod, so as to make me of equal standard quality. The pot was then taken out of the furnace by a crane which worked above, and I soon found myself left quietly to cool in a mould.

I may here mention, that in this melting-house I observed eight furnaces and two pouring machines. Each crane stood in the centre of four furnaces, freely commanding them all, and conveying the pots to the pouring machine. There were four men to each of the four furnaces; and proper attention to us on this trying occasion was enforced by the surveyor of the meltings, who was present. I was subsequently informed, on good authority, that the meltings are conducted by contract with the master of the mint and his chief clerk, as melter, who is responsible for all the bullion he receives, and has to return weight for weight.

The bar of silver, of which I now formed a part,

was delivered over to the moneyers, who perform the various processes of the coinage under contract with the master of the mint. It was first reduced to plates of the requisite thickness, by being passed repeatedly between the steel cylinders of machines. These plates were then subjected to the action of a cutting-out press, by means of which they were divided into circular pieces nearly of the size of the intended coin, and to this condition I was reduced, and when in that state was called a *blank*. I was then conveyed to the sizing room, as it was termed, where I was adjusted to the standard weight; and here I noticed that some pieces which were too light were selected in order to be melted again, while some that were too heavy were rasped or filed. All those of us that were left were very hard, in consequence of the compression to which we had been subjected, and we were accordingly exposed to the action of a clear red heat in a reverberatory furnace, as it was designated; after which we were boiled in very weak sulphuric acid, in order to make us quite clean again. It makes me sore to think of all the trouble and vexation to which I was then exposed; and what with the grubbing and scrubbing, the thumping and bumping, the boiling, and cutting, and squeezing I obtained, it seemed as if they would have left nothing of me.

Well, after I was taken out of the sulphuric acid, I was dried in warm saw-dust, and was then ready for the next processes of milling and stamping. This first operation is performed round the edge to prevent our being clipped or filed, which was a fraud, I have heard say, commonly practised upon our ancestors.

The coining engine or mill, was that to which we were next taken. In this the dies, or coining squares, are fixed, which are made to give their impressions to the *blanks*. These were placed on the one underneath, a pressure from a screw above giving them so violent a squeeze as to leave both the impressions upon the coins in the twinkling of an eye. This mill is so constructed that one workman may stamp 20,000 of us in a single day. Perhaps the reader may also like to know that the coining room is under the superintendence of the surveyor of the money-presses, in whose presence everything is performed, who has the care of all the dies, and must account to the board of management for all the instruments made and destroyed in the mint.

In due time, after having passed through the rough but necessary processes of the mint, I was conducted to the Bank of England, and there stored away, with a number of companions, in dim vaults, carefully secured by ponderous doors. I had not long to lament this confinement, however, for soon afterwards a porter carried the bag in which I was to an apartment upstairs. The bag was emptied, and I being near the top, rolled out, and was picked up by the nimble fingers of the clerk, and, with two other friends, paid over to a gentleman as part of a cheque which he was drawing. That was my first entrance into public life. Sometimes when I remember my plump and snowy appearance that morning, I contrast it with the emaciated and blackened look which time and hard work have given me, and feel disposed to sigh at the change in my condition.

I could have wished to have traced in detail my eventful history after that memorable morning, and to have sketched the various scenes in which I have mingled, but space forbids, and the barest allusion must suffice. Vivid, indeed, are the remembrances cherished by me, of the delight which I have given, and of the insults I have experienced, of the society of the excellent in which I have mixed, and of the debased and the criminal in which I have acted. I have been a messenger of peace and of blessing to the heart of the widow, as by my assistance she completed the last item of the rent she owed to an inexorable landlord; and I have been flung disdainfully on the pavement by an injured and insulted cabman, when offered, with four other coins like myself, as the supposed fare for a five-mile jaunt. I have been dropped into the money-box borne in the mouth of the blind man's dog; and I have been paid by the prudent mechanic into a savings-bank, as a portion of the fund for the contingencies of future years. I have been consecrated to the promotion of the highest interests of man, and I have been paid as the price of vice and crime. I have encouraged the honest and the industrious, I have bribed the weak into wrong, and I have rewarded the thief. I have jingled in the pocket of the schoolboy; have been bedewed with the tears of the needlewoman who received me as the pittance which competition doled out to her for her labour, her nerve, her very life; I have been flung in the air by the gambler; and I have been scrutinized, and bit, and punched, and pinched, and rung by the tradesman, to see that I was sterling. The influence which I have exercised on many a domestic circle, has been mighty for good and for evil; while, when in association with other coins of the realm, I may say that our power was paramount. I confess it, and I do so with sorrow, that we are the idol which millions of men adore—the silver or golden calf which they worship. Often and often have I wondered at the folly that could lead men to take such pains to heap up myself and my companions; slaving and toiling to do so; fretting and worrying their very lives out; and then, when they had accomplished their object, finding nothing, after all, but disappointment and vexation of spirit.

One result of all my experience has been, I may mention, that unless I am come honestly by, I never in the end do good to any who possess me. Often, too, in a poor man's cottage, where I have been earned by hard and honest labour, I have seen a peace and happiness that I never witnessed in the houses of those who had got possession of me by fraudulent or unfair means. But enough! I had no thought when I begun my biography of thus moralizing. Let me, therefore, conclude with a stanza, penned upon me by a poet, one of a class which too often has known the want of me:—

"Molten, graven, hammer'd, and roll'd;
Heavy to get, and light to hold;
Hoarded, barter'd, bought, and sold;
Stolen, borrow'd, squander'd, doled:
Spurn'd by the young, but hugg'd by the old
To the very verge of the churchyard mould;
The price of many a crime untold!"

PROJECTED INVASIONS OF ENGLAND.

LOUDLY as the public mind has of late been agitated by discussions on the above subject, we have no desire to deviate from our peaceful mission as the instructors and entertainers of a leisure hour, by plunging into the arena of politics or the sea of martial statistics. The most peaceful of our readers will, however, we apprehend, be interested by reading the following facts, which relate to an epoch in our history, considered by many, with what justice we do not determine, to bear some analogy to our own.

The preparations for invading England, begun by Buonaparte early in 1803, were continued till the autumn of 1805, when the "Armée d'Angleterre," concentrated at Boulogne, was broken up, the French land forces being suddenly directed upon Germany, and the "great flotilla" thus rendered useless. The latter numbered 1300 vessels, manned by 17,000 sailors and marines. At one time, the army ready to be embarked was fully 100,000 strong, with at least 10,000 horses; the whole to be commanded, as was given out, by Buonaparte himself; but probably by one of his chiet lieutenants, if he really intended—though this is doubtful—a descent upon our shores. However this may be, preparations were made to give him and his a vigorous resistance. The coasts of Kent and Sussex, in particular, were covered with lines of defence; and the whole country, from the Isle of Wight to John O'Groats, was more or less ready for resistance to attack, whenever and wherever it should be attempted. One of the most amusing evidences of the universal bellicose enthusiasm of the time is the following portion of a copy of macaronic verses, sent anonymously to a London newspaper, and which immediately made the round of all the metropolitan and country journals. It was written, says Mr. Collet, ("Relics of Literature," p. 231.) by Professor Porson.

"LINGO DRAWN FOR THE MILITIA.

"*Ego nunquam audivi such terrible news,
As, this present tempus, my senses confuse;
I'm drawn for a miles—I must go cum Marte,
And, cominus ense, engage Buonaparte.*"

"*Such tempora nunquam videbant majores,
For then their opponents had different mores;
But we will soon prove to the Corsican vaunter,
Though times may be changed, Britons never mutantur.*"

The government of the time neglected no means to keep up the martial spirit of the nation; and George III., conceiving the then situation of his dominions to resemble, in many respects, that which terminated so happily for England in the discomfiture of its Spanish enemies, during the reign of Elizabeth, directed proper researches to be made for ascertaining the nature of the preparations adopted at that period. The records in the Tower were accordingly consulted, and a number of papers drawn up from the materials of the contemporary national archives there deposited. These were reproduced, in a volume of 420 octavo pages,*

* The following is its title:—"A Report of the Arrangements which were made for the Internal Defence of these Kingdoms, when Spain, by its Armada, projected the Invasion and Conquest of England; and Application of the wise Proceedings of our Ancestors to the Present Crisis of Public Safety."

which, though printed, was not published; and as its contents are, many of them, interesting at all times, but especially in the present, we give the following details, chiefly taken from it.

The papers in the volume are classed under the following heads:—"External Alliance; Internal Defence; Military Arrangements; Naval Equipments." They are preceded by a statement of facts in the history of Europe at the period of the Spanish Armada; and by a sketch of events, showing the effect of the Queen's measures, at home and abroad. The force of the Armada, and the means taken to oppose it, are, of course, minutely stated. The former consisted of 166 vessels, including 40 "great hulks," which were manned by 27,128 men. The fleet mounted 1493 pieces of "great artillery." The following was the composition of the English naval force, rapidly got together to oppose the formidable invasive armament:—

	Men.
34 of her Majesty's shippes, grete and small, with	6204
34 marchants' shippes, with Sir F. Drake, westward	2394
29 shippes and barques paid by the Citie of London	2140
31 shippes and barques, which are victuallers, under the lord high admiral (Howard of Effingham)	1561
19 coasters, grete and small, under the lord admiral, paid by the Queene	943
23 coasters, under the lord Henrie Seymour, paid by the Queene	1003
23 voluntarie shippes, grete and small	930
Totallis	15,334 men.

In the volume is given a particular detail of the men furnished for the army by the queen's council, bishops, lords, etc., amounting in all to 31,055 foot, and 3684 horse. It appears that the footmen were allowed for their subsistence, every day, 1½ pound of bread, 2 quarts of beer, 1 quart of wine, 2½ pounds of beef, ½ pound of butter, 1 pound of cheese, and 1 pound of biscuit, while the daily ration of a horseman, besides a proportionate augmentation of the other allowances, was increased to 3½ pounds of beef! Such being the profusion of food furnished to the country's defenders, no less than 29 counties were laid under contribution for supplies, and 600 oxen were drawn [daily?] from "the butchery of London." The contingent of necessities to be supplied by each shire was fixed; and the respective quantities stated give us some idea of the relative growths and cultivation of some of them. Thus, while Kent was to supply 1000 quarters of wheat, and 600 quarters of malt, Surrey was only to furnish 200 quarters of wheat. This grain was chiefly collected from the counties nearest to London; while Staffordshire, Leicestershire, Warwickshire, Lincolnshire, Worcestershire, etc., supplied the oats.

Contrasting the levies of men made in the shires at that time, with the volunteers who came forward after the resumption of war, in 1803, we find the following differences:—in 1588, Cornwall furnished only 575 foot; in 1803 it embodied 16,966 effective men. In 1588, Essex was estimated to furnish 57 horsemen; in 1803, the number was 1251. At the former date, however, London was stated to contain "20,696 able householders, servants of our nation, within the wards; 933 strangers, able men for service; and 36 personnes suspected in religion." We may conclude that all known Romanists were passed over in the muster

rolls; and, probably, they were banished from the metropolis for a time.

The following passages we find in a contemporary paper, containing "The Substance of certain Maryners' Report touching the Spanysh Fleete, August, '88:"—"that all the fleete, being 150 saile, did set forth out of Lisbon on the 20th of May; and, commyng neere England, were driven back by contrarie winds." It is said, that in all, the whole number of them [the enemy's force] was but 20,000 men; whereof only 10,000 good soldiers. They put to sea from the Groyne, 22nd July, and came to the Land's End by the 28th of the same; and till they got to Plymouth they met with no man; where "40 of her Ma'ty's shippes did skirmish with them, and one galleasse was taken, and then sett on fire. . . . They think they will round about Scotland: that her Ma'ty's navie followed them, alwaies hard, and drove them like a flock of sheepe, but did not aboard them, because they are so high builte, so as forty of ours were troubled to take one of their greatest armadas, at the last fight on Mondaie: that, as they think, they should have landed [the Spaniards intended to land] about the Isle of Wight. . . . In summe, they confess the Duke of Medina [Sidonia] to be wonderfully amazed, and to stagger which way he may turn himself: that there were a great number of the hidalgos of Spaine in their armye; and that, now their chiefe bulwarks and armadas being discomfited, they may easilie be overthrowne, if theie be followed as they should," etc.

The following is an extract from a characteristic letter, by Admiral Drake, to secretary Walsingham:—"We have the army of Spaine before us; and mind, with the grace of God, to wrestle or fall with him. There was never anything pleased me better than the seeing the enemy flying, with a south wind, to the northwards. God grant they have a good eye to the duke of Parma; for, with the grace of God, if we live, I doubt it not but, ere it be long, so to handle the matter with the duke of Sidonia, as he shall wish himself at St. Maria, among his orange trees. God give us grace to depend upon Him, so as we shall not doubt victory; for our cause is good. Humbly taking my leave, this last of Julie, 1588, your honour's faithfullie to be commanded ever, FRA. DRAKE."—"P.S. I crave pardon of your honour for my haste, for that I had to watch this last night upon the enemy. Yours ever, FRA. DRAKE."

OYSTERS AND OYSTER BEDS.

SOMEBODY has styled fossiliferous rocks "monuments of the felicity of past ages." An undisturbed oyster-bed is a concentration of happiness in the present. Dormant though the several creatures there congregated seem, each individual is leading a beatified existence. The world without—its cares and joys, its storms and calms, its passions, evil and good—all are indifferent to the unheeding oyster. Unobservant even of what passes in its immediate vicinity, its whole being is concentrated in itself; yet not sluggishly and apathetically, for its body is throbbing with life and enjoyment. The mighty ocean is subservient to its pleasures. The rolling waves waft fresh and

choice food within its reach, and the flow of the current feeds it without requiring an effort. Each atom of water that comes in contact with its delicate gills evolves its imprisoned air to freshen and invigorate the creature's pellucid blood. Invisible to human eye, unless aided by the wonderful inventions of human science, countless millions of vibrating cilia are moving incessantly with synchronous beat on every fibre of each fringing leaflet. Well might old Leeuwenhoek exclaim, when he looked through his microscope at the beard of a shell-fish, "The motion I saw in the small component parts of it was so incredibly great, that I could not be satisfied with the spectacle; and it is not in the mind of man to conceive all the motions which I beheld within the compass of a grain of sand." And yet the Dutch naturalist, unaided by the finer instruments of our time, beheld but a dim and misty indication of the exquisite ciliary apparatus by which these motions are effected. How strange to reflect that all this elaborate and imitable contrivance has been devised for the well-being of a despised shell-fish! Nor is it merely in the working members of the creature that we find its wonders comprised. There are portions of its frame which seem to serve no essential purpose in its economy; which might be omitted without disturbing the course of its daily duties, and yet so constant in their presence and position, that we cannot doubt their having had their places in the original plan according to which the organization of the mollusk was first put together. Had the disputatious and needle-witted schoolmen known of these mysteries of vitality, how vainly subtle would have been their speculations concerning the solution of such enigmas!

But the life of a shell-fish is not one of unvarying rest. Observe the phases of an individual oyster from the moment of its earliest embryo-life, independent of maternal ties, to the consummation of its destiny when the knife of fate shall sever its muscular cords and doom it to entombment in a living sepulchre. How starts it forth into the world of waters? Not, as unenlightened people believe, in the shape of a minute, bivalved, protected, grave, fixed and steady oysterling. No; it enters upon its career all life and motion, flitting about in the sea as gaily and lightly as a butterfly, or a swallow skims through the air. Its first appearance is as a microscopic oyster-cherub, with wing-like lobes flanking a mouth and shoulders, unincumbered with inferior crural prolongations. It passes through a joyous and vivacious juvenility, skipping up and down as if in mockery of its heavy and immovable parents. It voyages from oyster-bed to oyster-bed, and, if in luck, so as to escape the watchful voracity of the thousand enemies that lie in wait or prowl about to prey upon youth and inexperience, at length having sown its wild oats, settles down into a steady, solid, domestic oyster. It becomes the parent of fresh broods of oyster-cherubs. As such it would live and die, leaving its shell, thickened through old age, to serve as its monument throughout all time—a contribution towards the construction of a fresh geological epoch, and a new layer of the earth's crust—were it not for the gluttony of man, who, rending this sober citizen of the sea from his native bed, carries him unresisting to busy cities

and the hum of crowds. If a handsome, well-shaped, and well-flavoured oyster, he is introduced to the palaces of the rich and noble, like a wit, or a philosopher, or a poet, to give additional relish to their sumptuous feasts. If a sturdy, thick-backed, strong-tasted individual, fate consigns him to the capacious tub of the street-fishmonger, from whence, dosed with coarse black pepper and pungent vinegar, embalmed partly after the fashion of an Egyptian king, he is transferred to the hungry stomach of a costermonger, or becomes the luxurious repast of a successful pickpocket.

Were it not that pains are taken to rear and cherish oyster-broods, the incessant war waged by the human race against this highly-esteemed but much-persecuted mollusk, would have gone far to extirpate the species long before now. It must have been a natural instinct that prompted the first oyster-eater to make his great experiment. Once, however, the luscious morsel had been tasted, the horrid and nauseous aspect of the animal was forgotten. Epicures soon learned to discriminate between the various qualities of this submarine delicacy, as well as of other edible shell-fish, and to prefer those that came from some localities over others.

The consumption of oysters in London alone is indeed enormous. During the season of 1848-49, one hundred and thirty thousand bushels of oysters were sold in our metropolis. A million and a half of these shell-fish are consumed during each season in Edinburgh, being at the rate of more than seven thousand three hundred a-day. Fifty-two millions were taken from the French channel banks during the course of the year 1828, and now the number annually dredged is probably considerably greater, since the facilities of transport by rail greatly increase the inland consumption of these as of other marine luxuries. French naturalists report, that before an oyster is qualified to appear in Paris, he must undergo a course of education in discretion. For the artificial oyster-beds on the French coast, where the animals are stored to be carried away as required, are constructed between tide marks, and their denizens, accustomed to pass the greater part of the twenty-four hours beneath the water, open their valves and gape when so situated, but close them firmly when they are exposed by the recession of the tide. Habituated to these alternations of immersion and exposure, the practice of opening and closing their valves at regular intervals becomes natural to them, and would be persisted in to their certain destruction, on their arrival in Paris, were they not ingeniously trained so as to avert the evil. Each batch of oysters intended to make the journey to the capital is subjected to a preliminary exercise in keeping the shell closed at other hours than when the tide is out, until at length the shell-fish have learned by experience that it is necessary to do so whenever they are uncovered by sea-water. Thus they are enabled to enter the metropolis of France as polished oysters ought to do, not gaping like astounded rustics.

We would not stake either our own or Dr. Johnston's authority on this conchological anecdote, which we offer with the preceding statistics (these we warrant) as supplementary to his interesting dissertation on oyster-fisheries. We have

it, however, from some of the best-qualified informants in France. In consequence of the continually-increasing consumption of oysters, the comparatively small number and extent of well-managed artificial oyster grounds, the waste and neglect of the dredgers upon those which are natural, and the limited localities in which oysters are found thriving indigenously in any considerable quantity, we believe that the time will come when the supply will be greatly decreased, and when this cherished luxury will necessarily rise in price until it may no longer, as now, find a place among the delicacies of a poor man's table. The law has done its best to preserve them; and parliament has more than once legislated about oysters. With proper care, a plentiful supply might doubtless be kept up, but they have many foes and devourers besides man. Starfishes, with greedy fingers, poke them out of their shells when incautiously yawning, and whelks assail them from above, perseveringly drilling a hole through and through their upper valves. Fortunately, man at least does not carry them away from their homes until they have attained their maturity. A London oyster-man can tell the ages of his flock to a nicety. They are in perfection when from five to seven years old. The age of an oyster is not to be found out by looking into its mouth; it bears its years upon its back. Everybody who has handled an oyster-shell must have observed that it seemed as if composed of successive layers or plates overlapping each other. These are technically termed "shoots," and each of them marks a year's growth, so that, by counting them, we can determine at a glance the year when the creature came into the world. Up to the epoch of its maturity the shoots are regular and successive; but after that time they become irregular, and are piled one over the other, so that the shell becomes more and more thickened and bulky. Judging from the great thickness to which some oyster-shells have attained, this mollusk is capable, if left to its natural changes unmolested, of attaining a patriarchal longevity. Among fossil oysters, specimens are found occasionally of enormous thickness; and the amount of time that has passed between the deposition of the bed of rock in which such an example occurs, and that which overlies it, might be calculated from careful observation of the shape and number of layers of calcareous matter composing an extinct oyster-shell. In some ancient formations, stratum above stratum of extinguished oysters may be seen, each bed consisting of full-grown and aged individuals. Happy broods these must have been, born in an epoch when epicures were as yet unthought of, when neither Sweeting nor Lynn had come into existence, and when there were no workers in iron to fabricate oyster-knives!

—*Westminster Review*.

THE WORLD AND ITS WAYS.—The world useth a man as ivy doth an oak—the closer it gets to the heart, the more it twists about the affections. Though it seems to promise and flatter much, yet it doth indeed but eat his real substance, and choke him in its embraces.

MANNERS.—Manners are more esteemed in society than virtues; though the one are artificial, like false brilliants; the other pure, like real jewels.

GLIMPSES OF "THE GOOD OLD TIMES."

"THE good old times" form the burden of many an idle song, and the frequent theme of repining patriots. But the times thus ardently desired, if restored, would materially disturb the equanimity and affect the happiness of the present generation. Unlighted, unpaved, undrained streets; no light vehicles for travelling; no general nor penny post; no comforts out-of-doors, and as few within; no pipes to convey water into the houses; and no luxuries: such were some of the characteristics of the belauded past. Just imagine a lord and his lady seated at breakfast, at 7 A.M., to a quart of beer, as much wine, two pieces of salt fish, six red herrings, four white ones, and a dish of sprats! and yet such was the case in the most noble mansion in the land in the sixteenth century. The retainers and servants of this same lord ate salt beef, mutton, and fish, three-fourths of the year, with little or no vegetables.

Let us picture for a moment the old streets of

his head in open day. "What will ye buy?" besets him on all sides; but he is without money to purchase. In Cheapside, he meets with what he considers a great concourse of people.

"One ofred me velvet, sylk, and lawne,
Another he taketh meby the hande—
'Here is Parys thred the finest in the land;'
I never was used to such thyngs indeade,
And wanting money, I might not speake."

On reaching Cornhill, he found his own hood exposed for sale—

"Then to Corn-Hyl anon I yode,
Where was much stolen gere among;
I saw where honge myne own hoode,
That I had lost among the thronge:
To by my own hoode I thought it wrouge;
I knew it well as I did my crede,
But for lack of money I could not speake."

Disheartened and disgusted with London life, the poor countryman gave up all idea of litigation, and resolved to get away at once.

Though the traffic in the olden times was not to



CHEAPSIDE IN 1637, WITH ITS CROSS AND CONDUIT.

London! The carriage-ways are full of pits and sloughs, and impassable from mud, or, what is worse, from filth and offal. There are no kerbstones, and the foot-passenger is exposed to the frequent encroachment of carriages or horses upon the path. It is only here and there in some chief thoroughfare that wooden palings, or posts with chains, afford a slight protection. The streets are obstructed with stalls, sheds, sign-posts, and projections of various kinds. The foot-passengers dispute and even come to blows to decide who shall "take the wall;" and no wonder, when it is remembered that the roofs of the houses are drained by clumsy spouts which eject the water into the streets.

The general character of old streets is well depicted in a poem by Lydgate, entitled, "London Lyck-penny" (or Lack-penny). A countryman has come to town to seek legal redress for his wrongs. He is roughly handled by the thieves at Westminster, who snatch the "hoode" from

be compared with the present, yet we find Stowe complaining that the number of cars, drays, carts, and coaches rendered travelling dangerous. "The coachman," says he, "rides behind the horses' tails, lasheth them, and looketh not behind him; the drayman sitteth on his dray, and letteth his horse lead home." He then adds, that he knew it was a good law and custom of the city that carts bound with iron were forbidden to enter the same, and that the forehorse of every carriage should be led by hand; but the law was not obeyed. If such a law was irksome then, is it desirable that it should be renewed in the present day, when the traffic is so immense, that during every twenty-four hours, it is calculated 119,602 individuals pass Bow church, Cheapside, not more than half of whom are foot passengers; the rest being riders in omnibuses, cabs, and other vehicles?

Cheapside in the olden times was famous for "its ridings, its cross, its conduit, and its standard." It was once called the beauty of London, in conse-



CORNHILL IN 1630.

quence of its row of goldsmiths' shops. The government manifested great solicitude to keep the goldsmiths all together. And when some who were not goldsmiths opened shops among them, they were ordered to close them, upon pain of imprisonment. Say not the former times were better than these. Cheapside was likewise long in repute for its mercers, drapers, and hosiers. In 1630-1, joustings were held in this street. On these occasions, it was difficult to keep the apprentice within the shops:—

"For whan ther eny riding was in Chepe,
Out of the shop thither wold he lepe;
And til that he had all the sight ysein,
And danced wel, he wold not com agen."

The balcony of Bow church is an interesting memorial of the shed erected for the kings of England and other great personages to behold the joustings and other city shows. This street is noted for its civic processions.

The old cross stood in the middle of the road facing Wood-street, but was pulled down in 1643, "to cleanse that great street of superstition." Upon the demolition of that ornament, as it was deemed, another was "popped up" near the Standard — "a high square table of stone, left in legacy by one Russell, a porter and well-minded man, with this distich engraven:—

"God blesse the porter, who great pains doth take;
Rest here, and welcome, when thy back doth ake."

The standard, where Richard Lions and Lord

Say were beheaded, was situate near Bow church; the conduit near the Poultry. But with all its joustings and shows and goldsmiths, who is not glad to exchange old Cheapside for the present?

Lombard-street was well known in the olden times, and recalls to our remembrance the circumstances leading to the erection of the Exchange on Cornhill. The merchants had formerly met in this old street for the transaction of business. Their meetings were rendered unpleasant and troublesome by reason of walking and talking in a narrow open street, being there constrained to endure all extremes of weather, cold and heat, snow and rain, or to take shelter in the shops. In the reign of queen Elizabeth, Sir Thomas Gresham offered to build an Exchange, if the citizens would purchase a

site for the purpose. A subscription was speedily entered into, and the space on Cornhill purchased and conveyed to him. In three years the edifice was completed; a few shops were included in it, but they remained for some time tenantless. In order that it might be brought into public notice, Sir Thomas invited the queen to pay a visit of state to the building. In addition, he got the shopkeepers already there to adorn as many shops as they could with wax lights and wares. Her majesty caused it to be proclaimed the *Royal Exchange*. Soon all the shops were tenanted. Wares in abundance were furnished—among other things mouse-traps, bird-cages, shining horn lanthorns, and Jews' trumpets. The Exchange became a place



THE EXCHANGE BEFORE THE FIRE IN 1838.

caused it to be proclaimed the *Royal Exchange*. Soon all the shops were tenanted. Wares in abundance were furnished—among other things mouse-traps, bird-cages, shining horn lanthorns, and Jews' trumpets. The Exchange became a place

of large resort. The entrance was beset by rat-catchers, sellers of dogs, birds, plants, trees, and other things, to the great annoyance and trouble of merchants, gentlemen, ladies, and others. Apple-women and orange-women had also their stalls hard by, with all the usual accompaniments of crowds of urchins playing and shouting. The managers of bull or bear-baits—the cruel, but favourite sport of the time—were accustomed to march to Cornhill, with their dogs, bears, and baboons, to proclaim at 'Change time, for the benefit of merchants and others, the hour when the spectacle was to begin. In the interior of the Exchange, "at every turn," says Dekker, "a man is put in mind of Babel, there is such a confusion of languages." The different merchants wore the dresses of their respective nations.

Cornhill was so called, as Stowe says, in consequence of a corn-market out of mind hidden there. It was celebrated for its "Tun"—a prison of similar shape to a tun—for night-walkers, the site of which is still marked by a pump and suitable inscription; its standard, whence distances were measured; and its conduit "of sweetest water castellated in the midst of the street." Gray, the poet, was born in a house on the site now occupied by No. 41.

WHAT IS SNOW?

So mild, up to the day on which we write, has been the present winter, that a native of Calcutta located in London might have almost asked this question, without our having been able to furnish him with an ocular reply to his inquiry. This morning, however, a few flakes have feathered the ground, as if to preserve for an English winter some of its old features. We proceed, therefore, to reply to the question which some may wish answered, What is snow?

Snow, we reply, is the moisture of the atmosphere frozen into minute crystals. It would scarcely be supposed that the broad flakes which every blast of wind blows hither and thither as it lists, are beautiful and perfectly formed collections of crystals, delicate in their structure, and regular in their measurement. None of the crystalline mineral masses, however, which usually come under the observation of those who are not professed mineralogists can at all compete with them in the elegance of their forms, or in the variety and beauty of their combinations. If a tolerable microscope be at hand, the examination of some flakes of snow is always an interesting and profitable employment for an hour of winter leisure. The minute vegetable and animal substances prepared for the microscope do not more perfectly exhibit wonderful regularity and simplicity of structure in their minutest parts than does the snow-crystal, which amazingly illustrates the boundless influence of the law of order in inanimate matter. An almost endless variety exists in these crystals, and the observer is at a loss to say which are the most delicate in their elementary forms, or the most perfect in their combinations. Attempts have been made to classify the crystals of snow, but the forms are so numerous, and the differences so

minute, that students have found the task more than usually difficult.

But if it be perplexing to classify the forms of snow-crystal, it is at present impossible to determine the cause by which their endless modifications are produced. The temperature and density of the atmosphere in which they are formed have doubtless an influence upon their structure, but beyond this probable conjecture we can scarcely be said to have any knowledge of the conditions which determine their crystallization. Man has investigated the order and arrangement of planetary systems, the distances, orbits, and velocities of worlds, the laws which sustain their conditions and regulate the recurrence of their phenomena, but he is not yet able to give a satisfactory reason for the varieties of form in a snow-crystal. Whether the crystallization is regulated by the peculiar conditions of the watery vapour diffused through the interstices of the atmosphere, if we may so speak, or from the influence of some subtle agent, is a problem to be resolved by future scientific discoveries.

In equatorial regions snow is unknown at the ocean level, and in all latitudes less than thirty-five degrees it is rare. In the polar regions, as Captain Scoresby informs us, snow falls nine days out of ten in the months of April, May, and June. Between the torrid and frigid zones, snow showers are more or less frequent at certain seasons of the year, according to their latitudes. In some of the northern countries of Europe, as in Norway, Sweden, Lapland, and Northern Russia, snow covers the ground for the larger portion of the year, and the warm but short summer breaks suddenly upon the frost-bound earth, to be, after a short interval, as suddenly driven away by inexorable winter. In Great Britain, Germany, and the northern portion of France, the seasons are distinctly marked, and the change from one to another is gradual; but although the winters are long and sometimes severe, the ice and snow upon the low grounds are of short continuance and seldom close the highways of commercial intercourse, whether by land or water. In the south of France, in Spain, Italy, Greece, and Southern Turkey, snow is rarely seen. The winters are mild and of short duration; they are seasons of repose rather than of suffering; hailed in their approach and regretted in their departure.

In all latitudes, snow may be found in the higher regions of the atmosphere. The elevation at which it is produced and its transmission to the earth depend on temperature. Snow often exists at comparatively unimportant altitudes when there is no evidence of its presence at lesser elevations, for having to descend through heated strata in its passage to the earth, it is liquefied and falls in rain. On the other hand, a sudden decrease of temperature at inferior heights may crystallize the floating vapour or falling water, so that while it rains on the summit of a mountain it may snow at its foot.

Coloured snow is not a common phenomenon in this country, though numerous instances of its appearance are on record. But in some parts of the polar seas, red and brown snow have a sort of permanent locality, and specimens have been carefully examined by scientific navigators. The co-

louring matter of brown snow is supposed to be an earthy substance collected from the surface of certain mountainous ridges by the waters which at midsummer are produced by the partial thaw of their thick icy covering. Red snow was observed by Captain Ross in Baffin's Bay, and his experiments led to the supposition that it is coloured by a vegetable substance. Scoresby, on the other hand, attributes the colouring to the agency of a bird (the little auk) found in great numbers in some parts of the polar seas. The time was when teachers would have thought such simple and natural explanations below the dignity of their learning, and the unlettered would have despised them because they made no demand upon their vulgar credulity and insatiable superstition. It was the custom not very long ago to call that prodigious which was only uncommon. In the year 1534 a shower of red rain, which was believed to be blood, fell in Switzerland; and to magnify the terrors of this prodigy, the drops were said to have taken the form of crosses on the clothing of those exposed to the shower. This event was acknowledged by the wise and illiterate to be a frightful supernatural phenomenon, and the wonder was celebrated by a no mean scholar in Latin verse. Cardan, a man whose great intelligence and research were hidden, if not lost, in the profundity of his superstition, took, for once, a common-sense view of the matter, and explained it by natural causes, for which he was assailed as an infidel. Kepler was probably the first to observe the crystalline form of snow, and particularly described the starlike structure and its hexagonal or six-sided varieties. This great man was an admirer of many of the superstitions of his age, but he was satisfied that these peculiar forms were the results of natural causes, and for this opinion he was more than once blamed by the mystics. The discovery of red snow by one of these philosophers would have frightened all Europe, and if perchance they had found it in Baffin's Bay, the arctic region might have waited a century in its dreary silence for another investigator.

A snow storm in this country is frequently preceded by a calm atmosphere—an unusual quietness of nature, but not such a one as to attract the attention of those who are unobservant of atmospheric changes. The air thickens, it loses its transparency, and those depths of space which in more genial seasons seem an ocean of colour without a medium, become turbid as though a curtain of dingy cloud were dropped from mid-heaven over the darkening world. A few flakes fall; but as day dwindles and night comes down overspreading the earth, they drop faster and faster, filling the air with their fleecy forms. The sun sets, and its last reflected rays light the snow-capped summits of the gentle hills where youth gambols in summer, and in declining autumn old age takes its annual farewell of green fields and fresh air. The hour has come for the celebration of the earth's mourning over the decay of her offspring; solemn and silent are all her agents, and other sounds are hushed or muffled. The tinkling bell of the sheepfold sounds as though it were cracked, and the harmonic chime of the village church is stopped midway in air; the homeward-bound traveller listens in vain for the well-known evening bells.

The rude village vagrant, who with jeering and insolent speech follows the poor and afflicted, as foot-sore or broken-hearted they halt through the street, or along the dusty pathway of the high road, sneaks home gibeless and silent. It is not the hour for noise, the atmosphere refuses to carry sounds while it is throwing its white emblems of youthful death upon the cold earth. But from beneath this shroud the buried shall, when the time comes, start into new life and vigour, types of that glorious resurrection, without the hope of which religion would be an empty name and life a painful dream.

The muffled sounds which float in the air during a snow storm have a cause easy of explanation. The air, although not the only conductor of sound, is the one which communicates to our organs of hearing the vibrations of all bodies. Upon it the effects of the sounding mass are spent, and it is the impression it receives of which we become sensible. We should be alike ignorant of the shrill chirp of the cricket, the musical note of the lark, and the rolling peals of thunder, if there were no medium of communication between our sense of hearing and the sounding body. The correctness, in short, of the impression made upon the ear depends upon the purity of the channel through which it is transmitted to it. When the air, therefore, is filled with snow, sound appears indistinct, because the medium of communication to the ear is, if we may so express it, choked up.

In the southern districts of England snow seldom falls in such quantities as to give much inconvenience to the inhabitants. When drifted by the wind, it is sometimes stacked in sheltered places, and may be a source of danger to the traveller. Such a storm we remember to have seen when the Dover wagon was buried under the snow, and the great roads out of the metropolis were for a few days almost impassable. But in the mountainous districts of Scotland it is otherwise, for there the herdsman and labourer are often exposed to danger, and always to suffering. If we travel still further north, we find the storms not only of longer duration, but spreading over a much larger extent of country. The snow storm Pachtusoff encountered on the coast of Nova Zembla in 1833, lasted three days, and spread over a district of fifteen hundred miles, covering the entire range of the Ural Mountains. It is pleasant enough to sit by a warm fire when the wind is whistling round the house in sullen gusts, and the snow is falling fast, and read about reindeer and sledges, to excite the imagination with fleet travelling and hair-breadth escapes, but only open the front door, and the enthusiasm will vanish.

No intensity of cold endured in this country can give a conception of the influence of frost within the polar circles. This desolate region is more terrible to the uninitiated navigator than the imagination can paint or the pencil delineate. It is in truth a world of snow and ice; land and water are, in winter, everywhere buried under a lifeless frigidity. Not a pulse beats, not a germ of life exists, beneath the thick and boundless mass of floating water. The lack of colour is repulsive from its monotony and many associations with sterility and death. The land is rugged and uneven on its surface, mountain rises upon mountain,

but there is neither beauty nor grandeur; all is white. Ocean itself is converted into ice and snow. Could the hand of frost arrest the raging sea of warmer climes in the moment of its utmost turbulence, and solidify it when the waves are highest, the scene would be more monotonous but not less desolate than a polar region. Upon an unbounded plain of ice and snow, the eye here and there detects the dim outline of upheaved icy fragments, piled in ruin one upon another, forming broken but long extended hillocks, jagged in outline, and uniform in colour. In the dim twilight of a sunless season, the junction of sea and land is unobserved, but in distant spots there rise indistinctly the outlines of snow-wrapt mountains, and in the intersecting valleys icebergs, with their spreading bases, lift their gaunt conical peaks of frozen water to the sky, as though to taunt their rocky compeers and defy them in height and perpetuity.

In still valleys—where in other climes the most fertile soil and the richest vegetation are found—on the indented shores of the ocean, the ice-mountains are for the most part covered with a perpetual snowy vest; or if, perchance, in some favoured spot the frost should for one or two months relax its hold, to let the light and heat of the never-setting sun of summer fall upon the earth under a temperature not many degrees above the freezing point, the only evidence of life is a saxifrage or a draba, or at best a salix, a tree, if such it can be called from its European types, three or four inches in height. All of these are born and die within a period of five or six weeks. From the end of October to the end of February the sun is invisible, giving only a feeble twilight of about six hours' duration when nearest the horizon. In this frigid night, there is nothing to relieve the eye, or to associate the snowy realm with other portions of the earth's surface, but the twinkling stars and flickering aurora which throw their feeble lights over the desolation, to be reflected in melancholy beams from the long-extended plains of unspotted snow and the peaks of icebergs.

AN EXTINGUISHER.

YONDER perambulating pyramid of deal boards, labelled on its four acute-angled fronts with Messrs. Welt and Felt's puffs of Wellington boots, at 9s. 4d. a pair, is technically termed, among the initiated, an Extinguisher, doubtless from its similarity in shape to that useful domestic implement. The term is applicable in more senses than one: the machine in question is not merely like an extinguisher in shape, but also in its operation; he who puts it on, in some sort extinguishes himself—quenches the last fluttering glimmer of ambition, and resigns his being to a lot of very equivocal happiness, and one much more adapted to provoke the wit than to excite the pity of unthinking spectators. One man may regard him as a peripatetic philosopher, an ingenious combination of Diogenes and a snail, carrying his humble mansion wherever he goes, and observing mankind from the summit of his desires; another may choose to look upon him as one who has voluntarily thrust himself into a pillory for the guerdon of fourteen-pence a day; a third, affecting to

look up to his cloudy top from a level of fifty feet below him, may hail him as a Simeon Stylites; while a fourth shall name him Cheops, because his bones are buried within the walls of a pyramid.

In sober truth, the tenant of an extinguisher is neither philosopher, Romish saint, nor anchorite. He is rather a man doubly and trebly unfortunate, who often, from the want of industry, the want of a profession, or the want of perseverance, capacity, or integrity, and, most of all, from the want of self-denial, finds his way to his wooden surtout. Other men achieve distinction through the exercise of positive virtues; he arrives at his through the sheer force of his numberless negations; the qualities which he does not possess accomplish his destiny, and degrade him to the lowest rank, as surely and inevitably as the qualities of enterprise and integrity exalt their possessors to the highest. Let us glance briefly over the history of one whom we knew in better days, and whom we lately encountered while sheltering his conical sedan, during a storm of rain, beneath the Piazza of Covent Garden Market.

Jack Rattle was the only son of a tradesman well-to-do in the world, and who drove a thriving business in a large town in the West of England. Unhappily for Jack, his father died after a short illness, just as the boy had left school, and was hesitating in the choice of a profession, having just completed his fifteenth year. By his father's will the whole of the property was equally divided between his two children, Jack and his sister. The executors found it necessary to sell the business, as the lad was too young to take it in charge. The will was proved at Doctors' Commons, and the property amounted to near 8000*l*. So soon as Jack was made aware that when he was of age he should come into the possession of four thousand pounds, his disinclination for business of any kind soon became apparent. He grew apace, but his pride dilated faster than his person. His father's executors, by virtue of the trust they held, article'd him to a solicitor, but they could not make him learn his profession, of every detail of which he contrived to remain consummately ignorant. He aped the man while yet a boy, and, cultivating dancing and whiskers in preference to Blackstone and Coke, grew up a very graceful and handsome ignoramus, the plague of his guardians, whom he was continually pestering for supplies, and the delight of quadrille parties where he shone a star of the first magnitude. When the last lingering year of his minority had at length taken wing, his guardians were but too glad to surrender their trust; and Jack, now his own master, and master of more than four thousand pounds besides, started off for Paris to enjoy his liberty unrestrained.

He was absent barely three years, during which time his sister had married a substantial farmer and borne him a brace of sturdy children. How Jack employed his long sojourn in the gayest capital of Europe it is impossible to tell with certainty, though it is very easy to guess, seeing that he left the whole of his money behind him, for which he brought back in exchange a shabby, braided suit of French cut, a prodigious crop of whisker and moustache, and an indescribable jargon of gasconading and slang gallicisms, intelligible to no one beyond the clique of roués and gamblers, into whose

hands it was plain that he had eventually fallen, and who, pigeon as he was, had plucked him to the last feather.

It was now that he received his first lesson in that science which many are so unwilling to learn, and pay so dearly for learning—knowledge of the world. His old master, the lawyer, upon whom he sought to quarter himself as an in-door clerk, dismissed him with a rather candid explanation of five minutes length; and his guardians, to whom he applied for a loan wherewith to establish himself in his father's business, sneered at the proposal, and asked him whether it was likely that if he could not take care of his own money he could take care of theirs? Jack trod the high ropes, and breaking away in a storm of passion, flew to the honest farmer who had married his sister, with whom he took up his abode as a guest. From a guest, honoured and cherished, accommodated with a nag, and indulged in all kinds of rural sports, he descended by degrees, as his welcome wore out, to "one of the family," then to a cumbersome inmate, always uselessly in the way, and finally to a pest whom it was indispensable to get rid of. Jack, whose perceptions were none of the most acute, would have hung on to the last, but for the representations of his sister, who enlightened him as to the true state of the case, and who advised him to go to London, and find employment by which he could maintain himself. As she backed this advice with the offer of a loan of twenty pounds, probably at the suggestion of her husband, who would have purchased Jack's absence at ten times the amount, her proposal was accepted, and Jack, mounting the night coach, dropped from its roof one fine morning in the spring of 1838, with his fortune to make among the million of struggling individuals all striving in pursuit of the same end.

Twice seven years have passed away since then, and Jack has *made* his fortune—made it as thoroughly as man can be said to make anything which he does not actually manufacture with his hands. Were we to trace the process through which he has arrived at the consummation of the four triangular deal boards in which he buries himself alive for the benefit of Messrs. Welt and Felt, and for the modest consideration they award him, we should find that his progress for the last fourteen years has been a series of successive failures, each of which deposited him a step lower on the social ladder; and we should find too that one and all resulted from the absence of qualities which he ought to have possessed, and which every man is bound to possess, to preserve, and to cultivate. As a clerk, his first employment, he failed from want of punctuality and attention; as a shopman, from want of politeness, and, it is to be feared, of integrity as well; as a town-traveller, from want of activity and good temper; as a cabman, from want of sobriety; as an omnibus conductor, from want of patience and civility;—and so on and on, and down and down, until circumstances, which he would never take the trouble to mould for himself, have shuffled him into his timber coil, and made him a perambulating four-sided puffing machine—a wandering variation of a bill-sticker's hoarding—a living substitute for a dead wall.

It often happens that a man serves for the moral of his own history; and thus it is with Jack Rattle.

To those who know him, and it may be to those who do not, his appearance in his large-lettered garb in the public streets is suggestive of other and very different things than wellington boots, at nine and four-pence a pair. Though but on the verge of forty, want and wretchedness have done upon him the work of years, have bowed his head and furrowed his once handsome face, in which the expression of a miserable content with a miserable lot forbids the beholder to indulge a hope that, by his own exertions at least, he will ever emancipate himself from it. Imagination sees in him a melancholy spectacle of a ruined life, a departed existence, confined above-ground—the wandering ghost of a buried ambition—a man, alas! who has thrown away a lifetime!

THE QUESTION OF ALL HEARTS ANSWERED.

THE doorway to eternity is ever open, and never has there been a moment, for ages past, when it could be said, "There is no spirit now on its last journey." That pathway never lacks a traveller. No road can be so beaten. As the tramp of one footstep dies away, another is heard following up in close succession. All of whom we read in history, and the myriads who have left no record on its pages, have passed through that mysterious arch, and gone out into the unbounded plains that stretch away outside. To the end of time this will go on. Not more inevitable is the setting of the sun, and the circuit of the planets. The crowds we meet with every day in our great cities, amidst their schemes of business and their dreams of pleasure, are marching on to "the silent waiting-hall where Adam meeteth with his children."

And when those who were loved are gone and missed, and the place that knew them once knows them no more, what can be done to comfort stricken hearts? Here lies an old letter written two thousand years ago to Cicero, when he lost his much-prized daughter. It came from a clear-headed and kind-hearted man, and he wished to say all he could to cheer his sorrowing friend. And he tells him Rome was sinking into ruin, and, after that, what could increase a patriot's tears; that the departed was released from calamity and evil; that there was nothing left to render life desirable; that death is the universal lot of human beings; that empires and cities fall, and therefore men cannot expect to be immortal; that the deceased had been spared as long as life was worth having; that it became not a philosopher to mourn; and that the physician Time was grief's best healer. And this was all the consolation that reason and love together could offer to the mourning Cicero, as he sat in his proud portico of Tusculum, and looked toward the Eternal City, and the temple-crowned Capitol—all of it a satire upon the impotence of human glory to one who was musing on and mourning over the dead.

And reason now, as she speaks her own language, cannot give much better comfort. What can she tell of those who are gone? The heart goes with them, and one wants to know where they are; but to all our agonizing questions there is found no answer. Carlyle speaks of man as

standing between two curtains, the one veiling the infinite past, the other shrouding in thickest fold the mysterious future; friends pass through and disappear; we lose them in the darkness. We shout after them, but get no reply. Again we shout, but all is stillness like the grave.

This is the sad but true report of the result of reason's searchings and inquiries. But is there no voice which speaks to us from amidst the veiled scenes of that eternity which borders upon time? Souls gone there are silent; but the Lord of souls, who leads them there, is not. One voice comes to us from the realms of the invisible, saying, "If any man serve me, let him follow me; and where I am, there shall my servant be." The Resurrection and the Life hath brought life and immortality to light. Whither he goes we know, and the way we know. *Our hope is in him.* Be it that reason can teach me I shall exist hereafter; it leaves me in doubt as to whether I shall be happy hereafter. Nay, speaking to me through the lips of conscience, telling me of sin and justice, it gives birth to the apprehension that the mysterious hereafter will be anything but bright with joy. The future becomes an object of fear rather than of hope. It appals rather than encourages. Not in man's fallen nature has God folded up the record of a heaven. The secret of salvation and immortality is lodged with him who through death destroyed him that had the power of death, and to him we must go for the life-giving lore. In his ministry he reveals the fact; by his death he displays the method; and through his resurrection he presents the proof, and pledge, and pattern of the believer's blessed immortality. Sweet are his allusions to Abraham's bosom, where the weary head and aching heart of God's suffering children shall be pillowed; and to paradise, as the pure and blessed abode into which ransomed spirits shall be introduced, there to be free for ever from their sin, guilt, and shame. And how does he wake up all our home sympathies, and create in our minds images of parental protection and support, and of domestic communion and joy, as shadows of good things to come, while he speaks of his Father's house where there are many mansions. Here are intimations, then, which do clearly indicate the fact, not merely that there lies a pathway on the other side death's gate; not merely that the gloomy barriers of mortality do not stop the progress of believing souls; but that the pathway is bright with the smile of God, and the progress shall be upward, even to the very steps of his paternal throne. And if we ask, how can this be? if, conscious that we are stained with pollution, stamped with guilt, accused by conscience, and convicted by witnesses innumerable, we inquire, how can we venture on a hope so glorious? we are told it is through the sacrifice of the man Christ Jesus; that by the shedding of his blood he hath brought nigh this grace; that Calvary is the only Pisgah which commands a view of the heavenly inheritance; and that there is no Joshua but him that can lead us into the promised land. And then he himself comes forward to show us what we shall be, presenting in his glorified humanity the model to which our nature is to be conformed. And surely if reason could not find out the Christian's hope, reason now cannot make it more clear.

As well might a man strive to grope his way through a dark and perilous glen by the light of a single star, or endeavour to aid the radiance of the noonday sun, by holding up a burning match before his brilliant beams.

The revelation of the future life resolves itself into two parts. Two stages of being await the Christian in futurity. The one very near, the other, how remote we cannot tell; the one almost touching us, then running onwards till it falls into the other, when the whole is seen swelling out, and spreading over an infinite space, where our thoughts are lost in deep floods of glory. We see that the first pathway, through which God will hereafter lead the faithful, conducts to a separate state, which the New Testament calls "Abraham's bosom," "paradise," an "absence from the body, and a being with the Lord." We learn that, when the Christian dies, his consciousness will remain; that he will think and feel; that he will hold communion with other minds; think pure and noble thoughts; experience elevated and ecstatic emotions; hold high and uninterrupted communings with beings like himself, and with his Maker. All this the apostle Paul indicates when he expresses a desire to depart and to be with Christ; for surely he could not have said this, if life be succeeded by a long, unconscious, dreamless sleep—if a blank and dreary space of being is to spread over man's history after the extinguishment of the light of Christ's now blessed presence. But unless an awakening follows, how could a vigorous, active mind, like Paul's, burning with love and zeal in his Master's cause, anxious to serve him incessantly, wish to fall into slumber, protracted, ignoble, and visionless? And how could such a state of thick oblivion warrant his calling it "being with Christ?" Impossible! The fact of a separate existence of the soul after death—a better and more glorious life than the present one—is revealed beyond all question; and after the first of these life-paths, who can doubt the second will follow? That there is a road up out of the grave to heaven; that the prison-house of the body will be opened on the great Easter-day of the resurrection; that there will be a restoration of the corporeal frame, and a reunion with the immaterial spirit, where its beauty will shine in unfading freshness for ever; is "an anchor of the soul, sure and steadfast."

That there are shadows resting on the future, every thoughtful mind must deeply feel. What part of the universe we are to occupy; what scenes will surround us; what will be our modes of perception, thought, and mutual intercourse; what will be the form and order of society; what will be our particular employments; how existence will be varied through unending years; how life will continue ever new, fresh, and juvenescent; these, and other questions, are at present unanswerable. Infinitely just, wise, and holy reasons are there for the reserve maintained. He who has revealed the hope of immortal blessedness is, in the measure of it, as well as in all other proceedings of his, perfect in wisdom and love. In relation to the wish that we did know more—a wish very common with imaginative and speculative minds—it may be said in John Foster's words:—"A far stronger impression is made on thinking spirits

(and on others nothing makes an impression), by an undefined magnificence, by a grand and awful mystery, when we are absolutely certain that there is a stupendous reality veiled in that mystery; when quite certain, too, that it relates to ourselves, and that it will at length be disclosed. Such a grand reality, thus mysteriously veiled, attracts thinking spirits most mightily, like the mystic and awful recess in the inmost part of the temple. It keeps in action inquisitiveness, conjecture, and expectation. It sets the mind on imagining the utmost that it can of grandeur and importance, and the idea still is, after the utmost efforts, it is far greater than all that. And thus, if we will think, this grandeur, veiled in darkness, has a more powerful effect on the mind than any distinct particulars made palpable to the apprehension, and brought down to our level in order to be made so."

But there is a path of glorious life we know; though, through what scenes it winds; what prospects it will disclose; to what sublime elevation it leads; to what point of exalted creaturehood and union with Deity it will bring the pilgrim; how he will walk along it; how God will lead him, speak to him, felicitate him, exactly—we do not know. But the Christian will know it all ere long. In awful, yet blissful wonder, his soul stands on the margin line of that infinite unknown, exclaiming, as he attempts with mortal eyes to pierce the shades, "Thou wilt show me the path of life." The divine Saviour will open the gate of this hall-girt region of existence, and through death's deep valley a hand brighter than the sun will lead him, and he shall behold "the city that hath foundations," the rock-built citadel of redeemed spirits, the spirits of just men made perfect; and up its cliffs, along steps cut there by the Lord of pilgrims, shall he rise, and reach the portals, and enter in; and, as he does so, say to pain, and sin, and fear, and death—farewell! The pathway of the resurrection shall be revealed afterwards. "The Lord shall descend from heaven with a shout, with the voice of an archangel, and the trump of God;" and then, quitting the sepulchre, the saints shall ascend to regions "which eye hath not seen;" they shall travel on beyond those dwelling-places which may be called the outposts of the celestial world, and reach the very interior of the promised land—the central city; the metropolis of the universe; the gathering-place of all God's countless children; the home of the elect; the abode of angels, and the palace of the great King.

Hast thou, whose eyes are now tracing these imperfect lines, this blissful expectation? Has the well-grounded hope been formed through faith in the world's Redeemer, and the experience of the renewing influence of the Spirit of God? Is it the testimony of consciousness that thou art placing an implicit reliance upon the infinitely meritorious life and death of our Mediator and Redeemer Jesus Christ? Truly this hope is worth more than tongue can tell. Think of the difference between a brilliant summer's noon with the light of the sun sparkling on the ocean, and a starless night on a wild shore of rocks, with angry waves breaking at your feet. It is a faint shadow of the difference between the light and gladness of a good hope, and the gloom and utter wretchedness of no hope at all.

TUNNELLING THE ALPS.

To complete a direct line of railroad communication between Boulogne, Venice, and Ancona, and consequently between London and the Adriatic, only one obstacle lies in the way. The chain of Mont Cenis and Mont Genève, running nearly northeast and southwest, would cross such a line, and present with the elevation of 11,000 feet an insurmountable bar to any direct and continuous railway. The railway can with some difficulty be made to Modane, at the foot of the northern crest of the Graian and Cottian Alps; but here it must stop, unless a subterranean passage can be found through the mountains, and a project for doing this has been for several years under consideration by the Sardinian government. Chevalier Henry Maus has devoted much study to making the examinations and calculations, and has invented a new boring machine for the purpose of carrying out the plan. He made his report early in 1849, and a commission of engineers, army officers, and geologists was appointed to examine into the feasibility of the project. Their report, illustrated by maps, has been published. The tunnel is expected to cost about 700,000*l*. It will measure 7 miles in length. Its greatest height will be 19 feet, and its width 25, admitting, of course, of a double line of rail. Its northern entrance is to be at Modane, and the southern entrance at Bardonnèche, on the river Mardovine. This latter entrance, being the highest point of the intended line of rail, will be 4092 feet above the level of the sea, and yet 2400 feet below the highest or culminating point of the great road, or pass, over the Mont Cenis. It is intended to divide the connecting lines of rail leading to either entrance of the tunnel into eight inclined planes of about 2½ English miles each, worked like those at Liege by endless cables and stationary engines, but in the present case moved by water-power derived from the torrents. At one point there will be 4850 feet of mountain overhead. Ventilation must be maintained by forcing air in and out by mechanical means.

The newly-invented machine, which it is proposed to use, consists of two large hydraulic wheels, 18 feet in diameter, which move two pulleys (with an endless cable passed twice round them) placed horizontally, and of 30 feet diameter, performing 22½ revolutions per minute. There is also an endless cable connected with the excavating machinery, to move at the rate of 35 feet per second, and a counterpoise or weight to keep the cable in a proper state of tension at the opposite end of the hydraulic wheels, and to travel on a wagon between these and a great well, sunk to receive a corresponding weight at the end of a rope. The machine, once presented to the rock, projects into it simultaneously four horizontal series of sixteen scalpels, working backward and forward, by means of springs cased in, and put in operation by the same water-power. While these are at work, one vertical series on each side works simultaneously up and down, so that together they cut out four blocks on all sides, except on the rock behind, from which they are afterwards detached by hand. During the operation, a squirt-pump throws out a jet of water between each pair of scalpels, to prevent the heating of the tools, and to wash out the rubbish. After their complete separation, the blocks are pulled out by the help of the endless cable, and received in a wagon, to be drawn from the tunnel. The machines are only to cut a gallery 13 feet wide and 7 feet high, which is afterwards to be enlarged by the ordinary means to the size mentioned above. It has already been ascertained that each of the two machines will excavate to the extent of 22 feet per day, and it is estimated that the whole excavation will be completed in four years.

Anecdotes of Eminent Men.

ROGERS AND DISRAELI THE ELDER.—The author of the "Pleasures of Memory" informs us that, when a boy, having an ardent desire to behold and converse with a man whose name was so illustrious in English literature, he determined on introducing himself to the great lexicographer, in the hope that his youth and inexperience might plead his excuse. Accordingly, he proceeded to Bolt-court, and, after much hesitation, had actually his hand on the knocker, when his heart failed him, and he went away. The late Mr. Disraeli used to relate, in conversation, a somewhat similar anecdote. Anxious to obtain the acquaintance and countenance of so illustrious a name, and smitten with the literary enthusiasm of youth, he enclosed some verses of his own composition to Dr. Johnson, and, in a modest appeal, solicited the opinion of the great critic as to their merits. Having waited for some time without receiving any acknowledgment of his communication, he proceeded to Bolt-court, and laid his hand upon the knocker with the same feeling of shyness and hesitation which had influenced his youthful contemporary, Mr. Rogers. His feelings may be readily imagined, when, on making the necessary inquiries of the servant who opened the door, he was informed that, only a few hours before, the great lexicographer had breathed his last.

INCIDENTS IN THE EARLY LIFE OF COLERIDGE.—King-street, Cheapside, the small street in which Guildhall is situated, is associated with a curious incident in the early life of the author of "Christabel." He was then a friendless and ill-fed boy, in the Blue-coat School. "From eight to fourteen," says Coleridge, "I was a playless day-dreamer, a devourer of books, my appetite for which was indulged by a singular accident. A stranger, who was struck by my conversation, made me free of a circulating library in King-street, Cheapside." The particulars of this "singular accident" are thus explained by Coleridge's biographer, Mr. Gilman:—"Going down the Strand," he says, "in one of his day-dreams, fancying himself swimming across the Hellespont, he thrust his hands before him as if in the act of swimming, when his hand came in contact with a gentleman's pocket. The gentleman seized his hand, turned round and looked at him with some anger: 'What! so young and so wicked!' at the same time accusing him of an attempt to pick his pocket. The frightened boy sobbed out his denial of the intention, and explained to him how he thought himself Leander swimming across the Hellespont. The gentleman was so struck and delighted with the novelty of the thing, and with the simplicity and intelligence of the boy, that he subscribed, as before stated, to the library, in consequence of which Coleridge was further enabled to indulge his love of reading."

CUVIER.—When the committee of the French Academy were employed in preparing the well-known academy dictionary, Cuvier, the celebrated naturalist, came one day into the room where they were holding a session. "Glad to see you, M. Cuvier," said one of the forty, "we have just finished a definition which we think quite satisfactory, but on which we should like to have your opinion. We have been defining the word crab, and explained it thus:—'Crab, a small red fish, which only walks backwards.'" "Perfect, gentlemen," said Cuvier; "only, if you will give me leave, I will make one small observation in natural history. The crab is not a fish, it is not red, and it does not walk backwards. With these exceptions, your definition is excellent."

THE DUKE OF KENT.—In travelling, princes, like other people, sometimes wish to be quiet and unrecognised. During the fatigues of a Canadian journey, the Duke of Kent travelled *incog.*, or meant so to do; but the veil was often removed by accident or indiscretion. "We arrived," says a companion, "rather late one evening at the little inn of the Cedars, on the St. Lawrence. The landlord was very attentive, for he saw that he had under his roof no ordinary personage, but who it was he could not possibly guess. He repeatedly entered his royal highness's sitting-room. The first time he said, 'I think, captain, you rang the table bell. What did you please to want?' The second time he brought in a plate of fine raspberries, and said, 'We have found in the woods, major, a few rasps. Will you please to taste them?' He invented a third and fourth excuse for entering, and saluted his highness first as colonel, and then as general. The last time, just before leaving the room, he returned from near the door, fell upon his knees, and cried out, 'May it please your majesty to pardon us if we don't behave suitable. I know you are not to be known. I mean no offence in calling you captain and colonel. What must I call you? For anything I can tell, you may be a king's son.' To this long speech the duke would have given a kind answer, but for an universal and irrepressible explosion of laughter. If you had seen the scared old innkeeper on his knees, you would have laughed too."

INCIDENT IN THE LIFE OF PRESIDENT FILMORE.—The following anecdote of the President of the United States was received from a highly respectable and intelligent American who witnessed the proceedings to which it refers. About fifteen years ago, Millard Filmore, at that period a lawyer in Buffalo, was engaged as counsel for a fugitive slave, who had been pursued by his master and arrested in that city. Mr. Filmore exerted his powers to defeat the slaveholder, and, in the course of his speech, gave utterance to the following sentiments. Addressing the three justices on the bench, he said, *they* might decide that the man was a slave, and give the master a certificate to carry him back into slavery, but there was a higher law than their decision. He did not believe that the man would be re-enslaved, for there were too many hearts outside, beating in favour of freedom, to permit it; referring to a number of brother fugitives out-of-doors, who stood ready to rescue the poor fellow, if needful. After hearing the appeal, the bench gave judgment against the slave; but the slaveholder could not prevail on any officer to convey his victim on board the steamer Pennsylvania, then lying within sight of the Justices' Court Room, with her steam up, ready to depart for Cleveland, Ohio. After the slaveholder had waited some time without success, the chief magistrate informed him that he must take the man away before sunset, or he would let him go. The slaveholder, seeing the strong excitement against him, thought it prudent to make his own escape, which he effected on board the same steamer in which he had intended to carry off the slave. When Mr. Filmore was offered remuneration by those who employed him, he nobly refused to take it, saying his best reward would be, that when a similar case occurred, they should send for him, and give him another opportunity of pleading for human rights. If such are the genuine sentiments of the present President of the United States, what must have been his feelings when he signed the slave-kidnapping bill, which has lately become the law of that land?